

What is claimed is:

1. A mask for reducing proximity effect, comprising:

a plurality of line-shaped features;

a plurality of groups of first assist features, each group of first assist
5 features positioned between two adjacent line-shaped features, wherein the
first assist feature is approximately rectangular in shape and the width of
the first assist feature is larger than the length of the first assist feature; and

a plurality of second assist features, each of the plurality of second
assist features positioned between one of the plurality of line-shaped
10 features and one group of first assist features.

2. The mask for reducing proximity effect of Claim 1, wherein the
width of the second assist feature is equal or close to the length of the first
assist feature.

3. The mask for reducing proximity effect of Claim 1, wherein the
15 space between the group of first assist features and the second assist feature
is equal to or larger than the width of the second assist feature.

4. The mask for reducing proximity effect of Claim 1, wherein the
space between the line-shaped feature and the second assist feature is larger
than the width of the line-shaped feature.

20 5. The mask for reducing proximity effect of Claim 1, wherein the
width of the second assist feature is smaller than two-fifths but larger than
one-fourth of the wavelength of an exposure source.

6. The mask for reducing proximity effect of Claim 1, wherein the
line-shaped feature corresponds to an isolation trench pattern to be formed
25 on a wafer.

7. A mask for reducing proximity effect, comprising:

a plurality of line-shaped features; and

a plurality of groups of assist features, each group of assist features positioned between two adjacent line-shaped features, wherein the assist feature is approximately rectangular in shape and the width of the assist
5 feature is larger than the length of the assist feature.

8. The mask for reducing proximity effect of Claim 7, wherein the space between one of the plurality of line-shaped features and one group of assist feature is larger than the width of the line-shaped feature.

9. The mask for reducing proximity effect of Claim 7, wherein the
10 length of the assist feature is smaller than two-fifths but larger than one-fourth of the wavelength of an exposure source.

10. The mask for reducing proximity effect of Claim 7, wherein the space between the adjacent assist features is larger than the length of the assist feature.

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